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Commentary Response

Variola virus does not synthesize interleukin-1β binding protein. The errors in paper by Shchelkunov, S.N., Blinov, V.M. and Sandakhchiev, L.S. (1993) FEBS Letters 319, 80–83

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Differences in designation of the same ORFs of Copenhagen and WR strains of vaccinia virus [1–6] had caused two errors during the first step of our comparative analysis of variola and vaccinia viruses genomes [7]. Properties of most proteins were studied for WR strain of vaccinia virus (see for review [2,8]) but the complete DNA sequence was determined for Copenhagen strain of this one [1]. Also, in several articles the same proteins (genes) have different designations. It leads to a muddled situation.

During our second step of the analysis we carried out alignment of variola virus, strain India-1967, and vaccinia virus, strains Copenhagen and WR, genomes simultaneously [9] and identified these errors.

C21L (B27R) ORF of vaccinia virus, strain Copenhagen, is not complement binding protein. Also ORF B15R of vaccinia virus, strain WR (but not strain Copenhagen), is IL-1 receptor-like protein [6]. Therefore ORF for IL-1 receptor-like protein in the case of variola virus, strain India-1967, is disrupted [9]. Analogous data for this genome region we have revealed for variola minor virus, strain Garcia-1966 (unpublished). These corrections have been made by us in our oral report [10] and poster [11] on the 9th International Congress of Virology (Glasgow, Scotland, 8–13 August, 1993).

Thus, we can conclude that variola virus contains the same set of genes belonging to the family of complement binding proteins as vaccinia virus. Sequence data for variola major virus, strain India-1967, and variola minor virus, strain Garcia-1966, allow us to speculate that destruction of the gene encoding IL-1B binding protein is a species-specific feature of variola virus.

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